



A.D. 1856 N° 1912.

S P E C I F I C A T I O N

OF

HENRY DUBS AND JOSIAH EVANS.

FURNACES.

LONDON:

PRINTED BY GEORGE E. EYRE AND WILLIAM SPOTTISWOODE,

PRINTERS TO THE QUEEN'S MOST EXCELLENT MAJESTY :

PUBLISHED AT THE GREAT SEAL PATENT OFFICE,

25, SOUTHAMPTON BUILDINGS, HOLBORN.

Price 3d.

1857.



A.D. 1856 N° 1912.

Furnaces.

(This Invention did not proceed to the Great Seal.)

PROVISIONAL SPECIFICATION left by Henry Dubs and Josiah Evans at the Office of the Commissioners of Patents, with their Petition, on the 15th August 1856.

We, HENRY DUBS, of the Vulcan Foundry, Warrington, in the County of
5 Lancaster, Engineer, and JOSIAH EVANS, of Haydock, in the same County,
Engineer, do hereby declare the nature of the said Invention for “IMPROVE-
MENTS IN EFFECTING THE CONSUMPTION OF SMOKE,” to be as follows:—

This Invention relates to a peculiar construction and arrangement of
furnaces for steam boilers or other purposes, whereby the combustion of the
10 smoke and gases is effected.

According to this Invention the furnace or fire box is partially divided by a
transverse fire-brick or metal mid-feather extending downwards a short
distance from the roof or crown of the furnace or fire box. Below this mid-
feather is fitted the grate, which is inclined downwards from the front to the
15 back of the furnace or fire box, and is capable of being raised or lowered
at pleasure by means of segmental racks and levers, or other convenient
mechanical arrangement.

The coal which has become incandescent will, from the inclination of the
grate, gradually work down to the lower end of the grate, or at that portion
20 behind the mid-feather, and when green fuel is to be introduced, the grate is
elevated so as to bring it nearly up to the lower edge of the mid-feather. The
coals are then thrown on to the front part of the grate, and the smoke and

Dubs & Evans' Improvements in Effecting the Consumption of Smoke.

unconsumed gases which are evolved therefrom are made to pass through the incandescent fuel at the lower end of the grate, and through openings in the mid-feather, which being highly heated will greatly assist in the combustion of the smoke; as the combustion of the fuel proceeds, the grate is gradually lowered, and the incandescent fuel pushed forward, or allowed to descend to 5 the lower portion of the grate to leave room for the fresh fuel to be introduced.

LONDON:

Printed by GEORGE EDWARD EYRE and WILLIAM SPOTTISWOODE,
Printers to the Queen's most Excellent Majesty. 1857.